

## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference P041193P0	<b>FOR FURTHER ACTION</b> see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/JP2005/022991	International filing date (day/month/year) 08/12/2005	(Earliest) Priority Date (day/month/year) 08/12/2004
Applicant  MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD.		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 4 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

## 1. Basis of the report

a. With regard to the language, the international search was carried out on the basis of:

- ☒ the international application in the language in which it was filed  
☐ a translation of the international application into \_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b))

b. ☐ With regard to any nucleotide and/or amino acid sequence disclosed in the international application, see Box No. I.

2. ☐ Certain claims were found unsearchable (See Box No. II)

3. ☐ Unity of invention is lacking (see Box No III)

4. With regard to the title,

- ☒ the text is approved as submitted by the applicant  
☐ the text has been established by this Authority to read as follows:

5. With regard to the abstract,

- ☒ the text is approved as submitted by the applicant  
☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority

6. With regard to the drawings,

- a. the figure of the drawings to be published with the abstract is Figure No. 1  
☒ as suggested by the applicant  
☐ as selected by this Authority, because the applicant failed to suggest a figure  
☐ as selected by this Authority, because this figure better characterizes the invention  
b. ☐ none of the figures is to be published with the abstract

## INTERNATIONAL SEARCH REPORT

International application No

PCT/JP2005/022991

A. CLASSIFICATION OF SUBJECT MATTER  
F04B39/02 F25B31/00

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
F04B F25B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y	US 5 542 266 A (SUZUKI ET AL) 6 August 1996 (1996-08-06) column 2, lines 17-19 claim 4	1,3,5, 7-9 4,6
X	----- PATENT ABSTRACTS OF JAPAN vol. 018, no. 533 (C-1259), 11 October 1994 (1994-10-11) & JP 06 184576 A (NISHI NIPPON TSUSHO KK), 5 July 1994 (1994-07-05) abstract	1
X	----- PATENT ABSTRACTS OF JAPAN vol. 2002, no. 09, 4 September 2002 (2002-09-04) & JP 2002 156165 A (HITACHI LTD), 31 May 2002 (2002-05-31) abstract ----- -/--	1

☒ Further documents are listed in the continuation of Box C.☒ See patent family annex.

## \* Special categories of cited documents:

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*&\* document member of the same patent family

Date of the actual completion of the international search

28 February 2006

Date of mailing of the international search report

07/03/2006

Name and mailing address of the ISA/

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## INTERNATIONAL SEARCH REPORT

International application No

PCT/JP2005/022991

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2004/191094 A1 (KOJIMA TAKESHI 'JP! ET AL) 30 September 2004 (2004-09-30) paragraphs '0002!, '0028! -----	1, 3, 7-9
Y	US 5 108 634 A (SEIKI ET AL) 28 April 1992 (1992-04-28) abstract column 4, lines 13-27 -----	4
Y	EP 0 846 749 A (SANYO ELECTRIC CO. LTD) 10 June 1998 (1998-06-10) page 7, lines 3,36-39 -----	6
A	PATENT ABSTRACTS OF JAPAN vol. 1998, no. 13, 30 November 1998 (1998-11-30) & JP 10 204458 A (MATSUSHITA REFRIG CO LTD), 4 August 1998 (1998-08-04) abstract -----	
A	PATENT ABSTRACTS OF JAPAN vol. 2000, no. 13, 5 February 2001 (2001-02-05) & JP 2000 297753 A (MATSUSHITA REFRIG CO LTD), 24 October 2000 (2000-10-24) abstract -----	
A	EP 1 225 334 A (MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD) 24 July 2002 (2002-07-24) the whole document -----	
A	WO 2004/057187 A (LG ELECTRONICS INC; KWON, GI-BONG; JUNG, WON-HYUN; LEE, SU-WON; LEE, D) 8 July 2004 (2004-07-08) page 6, lines 16-18 -----	
A	US 5 704 216 A (HIRANO ET AL) 6 January 1998 (1998-01-06) column 8, lines 3-10 -----	

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/JP2005/022991

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